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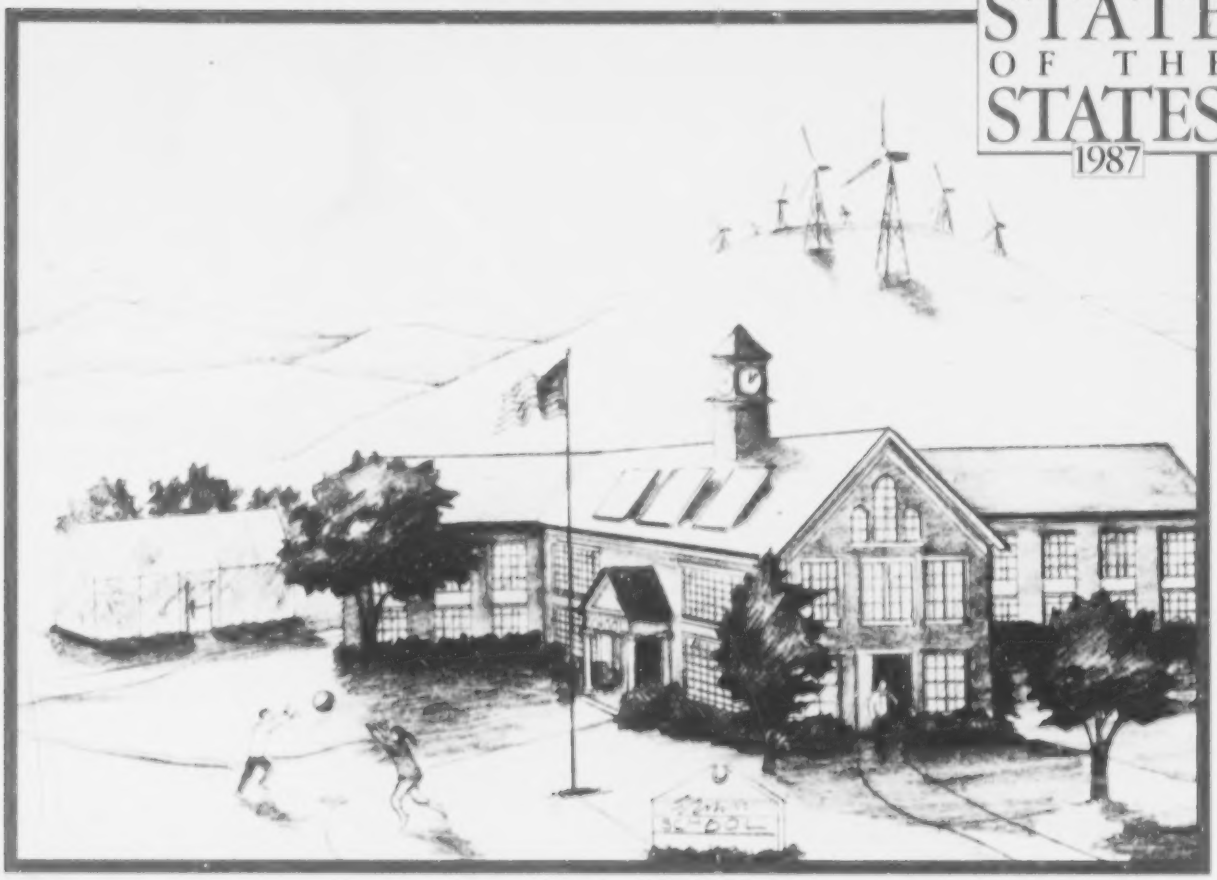
THE STATE OF THE STATES 1987



RENEWABLE & CONSERVATION

6

APPENDIX

FUND FOR RENEWABLE ENERGY & THE ENVIRONMENT

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Introduction

The Renewable Energy and Conservation Appendix, one of six appendices designed to supplement the information presented in the 1987 State of the States report, has been compiled to allow a more detailed look at renewable energy and conservation on the state level. It provides a national picture of the topic through key data, and it allows a comparison of actions have taken to make energy supply more secure and its use more efficient. Information from the main report--state rankings, primary map, brief text, and primary matrix are presented in the forward portion of the packet. Additional information and maps, as well as renewable energy and conservation contacts are also included.

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STATE ABBREVIATIONS

AL	ALABAMA
AK	ALASKA
AZ	ARIZONA
AR	ARKANSAS
CA	CALIFORNIA
CO	COLORADO
CT	CONNECTICUT
DE	DELAWARE
FL	FLORIDA
GA	GEORGIA
HI	HAWAII
ID	IDAHO
IL	ILLINOIS
IN	INDIANA
IA	IOWA
KS	KANSAS
KY	KENTUCKY
LA	LOUISIANA
ME	MAINE
MA	MASSACHUSETTS
MI	MICHIGAN
MN	MINNESOTA
MS	MISSISSIPPI
MO	MISSOURI
MT	MONTANA
NE	NEBRASKA
NV	NEVADA
NH	NEW HAMPSHIRE
NJ	NEW JERSEY
NM	NEW MEXICO
NY	NEW YORK
NC	NORTH CAROLINA
ND	NORTH DAKOTA
OH	OHIO
OK	OKLAHOMA
OR	OREGON
PA	PENNSYLVANIA
RI	RHODE ISLAND
SC	SOUTH CAROLINA
SD	SOUTH DAKOTA
TN	TENNESSEE
TX	TEXAS
UT	UTAH
VT	VERMONT
VA	VIRGINIA
WA	WASHINGTON
WV	WEST VIRGINIA
WI	WISCONSIN
WY	WYOMING

STATE PROGRAM RANKINGS: HOW STATES MEASURE UP

	AIR PROGRAMS	SOIL CONSERVATION PROGRAMS	GROUNDWATER PROGRAMS	HAZARDOUS WASTE PROGRAMS	SOLID WASTE PROGRAMS	RENEWABLE ENERGY & ENERGY CONSERVATION	TOTAL	RANK
AL	3	3	2	3	3	2	16	26
AK	7	3	3	2	2	1	18	25
AZ	7	3	7	5	2	3	27	19
AR	1	3	2	5	3	4	18	25
CA	10	3	7	9	9	10	48	2
CO	4	6	4	3	4	3	24	21
CT	9	6	9	4	9	7	44	4
DE	1	8	6	3	4	2	24	21
FL	7	4	9	8	6	7	41	7
GA	4	5	7	4	3	3	26	20
HI	4	4	3	2	2	4	19	24
ID	2	1	6	1	2	6	18	25
IL	7	9	5	7	7	6	41	7
IN	6	5	4	6	7	8	36	10
IA	5	10	5	5	7	7	39	8
KS	2	5	8	8	4	2	29	17
KY	7	3	1	6	8	3	28	18
LA	5	3	3	7	2	1	21	23
ME	3	6	7	6	6	8	36	10
MD	3	8	7	6	6	4	34	12
MA	6	4	8	9	6	8	41	7
MI	8	7	8	9	8	3	43	5
MN	5	6	5	9	9	4	38	9
MS	1	3	2	4	2	2	14	28
MO	5	6	7	8	1	4	31	15
MT	2	5	6	3	1	6	23	22
NE	4	6	6	2	6	7	31	15
NV	2	6	4	2	2	7	23	22
NH	6	5	5	7	5	4	32	14
NJ	9	6	7	10	10	5	47	3
NM	1	2	8	5	1	6	23	22
NY	5	5	10	8	8	7	43	5
NC	8	7	8	6	6	7	42	6
ND	1	3	4	2	3	3	16	26
OH	8	8	4	5	5	4	34	12
OK	5	5	5	4	7	3	29	17
OR	6	2	7	5	7	8	35	11
PA	8	6	5	5	3	5	32	14
RI	6	4	6	4	7	3	30	16
SC	6	5	7	5	2	6	31	15
SD	1	8	6	2	2	4	23	22
TN	3	3	4	7	5	7	29	17
TX	7	2	2	5	3	7	26	20
UT	3	4	3	2	1	3	16	26
VT	3	3	5	6	4	7	28	18
VA	8	7	6	2	3	7	33	13
WA	8	1	6	5	5	3	29	17
WV	2	5	2	4	1	1	15	27
WI	9	8	8	7	8	9	49	1
WY	1	3	8	1	2	1	16	26

AVERAGE ENERGY BILL FOR ELECTRICITY, FUEL OIL, AND NATURAL GAS

	Electricity[1] (cents per kilowatt hour)	Fuel Oil[2] (cents per gallon)	Natural Gas[3] ($'s per 1000 cubic feet)
Northeast (#1)	11.63		
New York		101.8	$6.01-7.00
New Jersey		96.2	6.01-7.00
Pacific (#2)	9.64		
California		NA	5.01-6.00
Nevada		NA	5.01-6.00
Arizona		NA	5.01-6.00
Hawaii		NA	> 7.01
New England (#3)	9.21		
Connecticut		103.5	> 7.01
Maine		96.0	> 7.01
Massachusetts		99.9	6.01-7.00
New Hampshire		97.4	6.01-7.00
Rhode Island		10[illegible]9	6.01-7.00
Vermont		102.1	5.01-6.00
Central Plain (#4)	8.62		
Kansas		NA	3.10-4.00
Iowa		NA	4.01-5.00
Missouri		NA	5.01-6.00
Nebraska		NA	4.01-5.00
Southwest (#5)	8.46		
New Mexico		NA	4.01-5.00
Oklahoma		NA	3.01-4.00
Arkansas		NA	3.01-4.00
Louisiana		NA	3.01-4.00
Texas		NA	3.01-4.00
Mid-Atlantic (#6)	8.10		
Pennsylvania		93.1	5.01-6.00
Delaware		96.7	6.01-7.00
Maryland		94.1	6.01-7.00
District of Columbia		92.4	6.01-7.00
Virginia		89.7	5.01-6.00
West Virginia		87.7	5.01-6.00
Midwest (#7)	8.06		
Michigan		92.0	5.01-6.00
Ohio		86.6	5.01-6.00
Illinois		85.8	5.01-6.00
Indiana		85.1	4.01-5.00
Wisconsin		90.9	5.01-6.00
Minnesota		91.7	5.01-6.00
Southern (#8)	7.41		
Kentucky		NA	4.01-5.00
Tennessee		NA	4.01-5.00
North Carolina		NA	5.01-6.00
South Carolina		NA	5.01-6.00
Georgia		NA	5.01-6.00
Alabama		NA	4.01-5.00
Mississippi		NA	3.01-4.00
Florida		NA	3.01-4.00
Rocky Mountain (#9)	6.91		
Montana		NA	4.01-5.00
North Dakota		NA	5.01-6.00
South Dakota		NA	4.01-5.00
Wyoming		NA	4.01-5.00
Utah		NA	4.01-5.00
Colorado		NA	4.01-5.00
North-west (#10)	4.78		
Oregon		84.0	5.01-6.00
Washington		85.3	5.01-6.00
Idaho		89.3	5.01-6.00
Alaska		94.1	0.0-3.00

[1]**Electricity:** Figures are for 210 major private power companies and do not includes rates for 2,194 public power systems (which average 30 percent less); rates are not included for 870 rural electric cooperatives. Private power companies provide 78 percent of the nation's electricity.
Figures denote average cost in cents per kilowatt hour at 500 kilowatt hour rate. Nationwide average for 1984: 8.22 cents per kwh. The regional grouping of states is NAEUC's. (source: National Association of Regulatory Utility Commissioners, Washington, D.C.).

[2]**Fuel Oil:** Fuel oil prices are for No. 2 distillate or average 1985 residential end-user rates excluding tax. EIA has not gathered information for many states which it considers low volume users. (source: Energy Information Administration, Washington, D.C.).

[3]**Natural Gas:** Natural gas prices are 1985 averages for delivery to all types of consumers in dollars per thousand cubic feet. (source: Energy Information Administration, Washington, D.C.).

RENEWABLE ENERGY AND CONSERVATION--THE BIG PICTURE

Every major city and state government faces a quiet crisis over energy use. Even those which now enjoy a glut of electricity or natural gas, or relatively cheap oil, are approaching a period in which planning time and options will begin to close out.

In the last decade, renewable energy and conservation (using energy more efficiently) have become the most promising solutions for avoiding a new energy crisis. Since 1974 more efficient use of energy has helped to diminish projected growth in energy demands for they year 2000 by half--and substantially reduced the need for oil imports and new power plants. Annual growth in electricity needs, for example, has dropped from seven percent per year to less than two percent per year. Overall, the nation is about 24 percent more efficient in its energy use today than in 1973.

It's generally acknowledged that this energy efficiency is only scratching the surface of much greater potential. Efficient light bulbs now on the market have the potential to save half the electricity now used for lighting. Variable drives on electric motors could save one third the electricity they consume. And energy efficient home appliances are projected to save half the electricity they now use. A 1983 Congressional Research Service study reported cost effective conservation potential for 161,000 megawatts of electricity by 1990 and 214,000 megawatts by the year 2000--equal to more than 200 large nuclear plants.

Renewable energy sources such as solar, wind, biomass, hydro, and geothermal also hold bright prospects. In 1979, the federal government estimated 20 percent of the nation's energy could come from renewable energy technologies by the year 2000. Today, renewable energy sources supply 9.6 percent of total U.S. energy production. The problem of doubling renewable energy supply in the next fifteen years--and increasing our energy efficiency as well--is a lack of on-going political commitment.

Energy policy-making is largely crisis oriented. In response to the oil shocks of 1973 and 1979 Congress passed a half dozen laws to stimulate state promotion of renewable energy and energy efficiency. Today, the support for these programs has eroded. Funding for solar research and development was slashed from $771 million in 1981 to $176 million in 1986. Federal income tax credits were eliminated for residential purchase of renewable energy equipment in 1985, and business credits were scheduled for phase out. The Residential Conservation Service budget was cut from $9.2 million in 1981 to $400,000 in 1986. Energy conservation funding for institutional buildings was cut from $159 million in 1981 to $52.5 million in 1986. And state energy conservation funding was cut from $37.2 million to $17.7 million for the same period.

By the end of 1986, seven of the 24 states with tax credits for renewable energy systems had let the provision expire. And as of September 1986, only ten states had passed legislation or adopted regulations to push least-cost energy planning at the

state level. And in the absence of federal appliance efficiency standards (which were vetoed by President Reagan in November 1986), three states have passed their own standards.

While headway is being made by a few states and major cities, signficant progress is required to avert or minimize an energy crisis in the next decade. Current federal policies have been paralyzed by the influence of major energy producers. The funding support for nuclear energy, for example, has remained relatively intact at approximately $350 billion per year while the cuts have undermined the potential for renewable energy and conservation. The key to what course events may take rests in large part on politcal choices and price rises in traditional fuels--oil, gas, coal, electricity.

ENERGY SNAPSHOT

California is widely recognized for its encouragement of renewable energy development. The state has formulated the standards, authority, and regulations to require "least-cost" energy development, and until recently offered substantial tax incentives to independent energy developers. Residential and commercial purchasers of renewable energy systems have also received income tax credit which has helped overcome intitial market barriers. In addition to such provisions, California has formulated building codes which require greater energy efficiency, and efficiency standards for a variety of appliances.

Broadening the use of such policies has run into resistance of temporarily low fuel prices and federal policies which emphasize boosting traditional energy supply sources over efficiency measures. Utility and energy companies are also fighting to maintain monopoly control of energy markets and limit competition and efficiency that many view as cutting into their growth in sales and profits.

RANKING NOTES

States were ranked on a scale of one to ten on the strength of their particular policies. Key factors weighed were: legislative authority for programs, scope of established programs, extent of funding, and indications of progress. The emphasis was on states that are attempting to institutionalize energy efficiency into building codes, tax structures, and regulatory policies. Primary consideration was given to states which have formulated comprehensive laws for "least cost" energy planning. The use of tax credits for solar and renewable energy systems, and the extent of utilization of grants and loans from the Solar Energy and Energy Conservation Bank were also assessed as signs of a state's interest and ability to support vital technological progress and savings of fossil fuels.

In addition to these primary indicators, assessment was also made of state policies which allow construction-work-in-progress charges that have encouraged overbuilding of centralized energy systems and undermined renewable energy and energy efficiency development.

ENERGY MATRIX

	LEAST COST PROVISIONS & REGULATIONS[1]	INCOME TAX CREDITS FOR SOLAR AND RENEWABLE ENERGY SYSTEMS[2]	TAX CREDIT EXPIRATION DATE	% USE OF AVAILABLE[3] SOLAR ENERGY & ENERGY CONS. BANK 1982-1986		BUILDING CODE PROVISIONS[4]	APPLIANCE EFFICIENCY STANDARDS[5]	COMM. WORK IN PROGRESS POLICY[6]
				CONSERVATION	SOLAR			
AL	3	N		8.42%	128%			No
AK	3	N		—	—			—
AZ	3	25% res. & comm.	12/87	12.04%	84.38%			partial
AR	2	N		97.67%	—			partial
CA	1	10% res./25% comm.	12/86	79.76%	9.06%	•	•	No
CO	3	30% comm.	12/86	38.88%	—			partial
CT	2	30% comm.	12/86	55.74	87.97			partial
DE	3	$200 flat credited res. only	open-ended	—	8.93			—
FL	1	N		93.95	25.93	•		partial
GA	3	10-20% res. & comm.	12/89	84.11	—			partial
HI	3	15% res. & comm.	12/92	—	53.33			No
ID	2	10% res. only	open-ended	70.30	—			No
IL	1	N		94.01	—			partial
IN	2	25% res. & comm.	12/87	92.06	100			No
IA	1	N		101.19	76.00			No
KS	3	N		82.22	—			partial
KY	3	15% res. & comm.	12/86	74.07	74.00			partial
LA	3	N		—	—			partial
ME	1	20% res.	12/88	79.85	52.00		•	partial
MD	2	N		—	—			partial
MA	2	35% res.	12/87	94.09	97.67	•	•	No
MI	3	15-30% res.	12/88	88	3.25			—
MN	2	N		65.92	11.92	•		partial
MS	3	N		34.74	—			—
MO	2	N		96.42	103.46			No
MT	2	2½ - 5% res. 35% comm.	12/86	43.78	—			No
NE	Public Power	N	12/85	71.83	—			—
NV	1	N		100	—			partial
NH	2	N			76.26			No
NJ	2	N		56.07	—			partial
NM	2	25% res. & comm.	12/89	24.27	87.19			partial
NY	2	N		86.35	7.74	•		partial
NC	2	25% res. & comm.	open-ended	100.50	98.72	•		partial
ND	3	15% res. & comm.	open-ended	26.46	—			short term
OH	2	N		84.82	—			partial
OK	3	55% res./30% comm.	12/90	76.01	—			partial
OR	1	25% res. & 35% comm.	12/89/90	91.54	—			No
PA	2	N		77.80	98.23			partial
RI	3	10% res. & comm.	6/90	72.79	—			No
SC	2	25% res. & comm.	open-ended	50.20	—			partial
SD	3	N		4.54	—	•		No
TN	Public Power	N		79.40	9.13			—
TX	1	N		89.18	—			partial
UT	3	25% res. & comm.	12/90	87.99	107.92			partial
VT	1	N		32.43	—			partial
VA	2	20% res. & comm.	12/86	99.24	73.43			partial
WA	2	N		—	90.23			No
WV	3	N		—	—			partial
WI	1	N		91.92	—	•		partial
WY	3	N		—	—			No

FOOTNOTES TO THE RENEWABLE ENERGY AND CONSERVATION MATRIX

1. Least-cost energy policies of the states were examined by Public Citizen's Critical Mass Energy Project in 1985. The numerical assessment is based on their evaluation of progress of a state toward a comprehenisve model for least-cost strategies:

1= comprehenisve regulatory authority and policies in place which require integrated planning and investment process for utilities;

2= state has made some progress toward least-cost planning process and has some control over utility investment;

3= state has made little progress in implementing policies and authority to encourage least-cost strategies.

Source: Critical Mass Energy Project, Least-Cost Energy Planning: Is There Really A State Movement? Washington, D.C. Dec. 1985.

2. This column addresses state income tax credits only, not rebates or sales tax exemption. Policies for income tax exemption vary widely, but following federal legislation, the general trend is to let state credits expire. "N" signifies no income tax credits.
Source: Solar Rating and Certification Association, State Solar Directory Washington, D.C., 1985 (and personal communication with state officials).

3. More than 80 percent of the total funding for the federal Solar Energy and Energy Conservation Bank was applied to conservation and not solar measures. Many states did not utilize the full amount of funding allocated to them in either category.
Source: Solar Energy and Energy Conservation Bank, data printout, Washington, D.C., July 1986.

4. Although many states have minimal requirements for energy efficiency in new buildings, those with the most substantial standards are included here.
Source: National Conference of States on Building Codes and Standards, Herndon Virginia.

5. Many states are also formulating appliance efficiency standards in the absence of a federal standard, however only three states have currently passed such a law.
Source: American Council for an Energy-Efficient Economy, Washington, D.C.

6. State regulatory policies play an important role in energy development. Construction-work-in-progress charges have been a primary mechanism that allowed the overbuilding of large, centralized electric generating plants in the 1970s and early 1980s--wasting energy capital and resources and undermining the growth of energy efficiency and renewable energy technologies.

Table I.

STATE LEADERS IN THE DEVELOPMENT OF RENEWABLE ENERGY TECHNOLOGIES

Technology	Number of Active States	Total MW On-Line or with Firm Plans	Three States Leaders in Developing Technology (with % of Total MW)
Waste to energy	23	1,664	New York (14.5%), Florida (14.5%), California (12.1%)
Landfill gas	7	44	California (47.5%), Wisconsin (22.7%), New York (20.4%)
Wood	8	771	California (55.9%), Maine (15.8%), Oregon (10.5%)
Geothermal	4	2,404	California (94.9%), Nevada (3.3%), Utah (1.7%)
Wind	7	1,474	California (96.5%), New York (1.2%), Hawaii (1.0%)
Hydro	18	716	Louisiana (26.9%), California (23.7%), New York (17.1%)
Photovoltaics	1	8	California (100%)
Solar thermal	1	211	California (100%)

SOURCE: Investor Responsibility Research Center, Inc.

07/31/86

Federal Solar Energy and Energy Conservation Bank State Funding

STATE	INTIAL ALLOCATION PLAN	INTIAL ALLOCATION ACTUAL	%	SECOND ALLOCATION PLAN	SECOND ALLOCATION ACTUAL	%	THIRD ALLOCATION PLAN	THIRD ALLOCATION ACTUAL	%
Alabama	82,978.00	82,978.00	100.00%	0.00	0.00	ERR	0.00	0.00	ERR
American Somoa	0.00	0.00	ERR	120,000.00	120,000.00	100.00%	0.00	0.00	ERR
Arizona	100,000.00	100,000.00	100.00%	63,100.62	63,100.62	100.00%	0.00	0.00	ERR
Arkansas	540,000.00	540,000.00	100.00%	279,900.00	279,900.00	100.00%	582,600.00	582,600.00	100.00%
California	1,265,000.00	1,265,000.00	100.00%	1,248,700.00	1,248,700.00	100.00%	1,281,700.00	636,811.83	49.68%
Colorado	79,060.47	79,000.47	100.00%	73,457.26	65,548.06	89.23%	162,200.00	101,002.07	62.27%
Connecticut	1,000,000.00	939,906.28	93.99%	204,700.00	188,464.20	92.07%	300,200.00	80,220.27	26.72%
Delaware	0.00	0.00	ERR	53,500.00	10,916.00	20.40%	0.00	0.00	ERR
District of Columbia	58,221.19	58,221.19	100.00%	19,991.83	19,991.83	100.00%	0.00	0.00	ERR
Florida	500,000.00	500,000.00	100.00%	753,800.00	753,800.00	100.00%	707,700.00	538,336.53	76.07%
Georgia	245,672.57	245,672.57	100.00%	187,664.83	187,664.83	100.00%	375,500.00	372,456.24	99.19%
Guam	0.00	0.00	ERR	0.00	0.00	ERR	0.00	0.00	ERR
Hawaii	0.00	0.00	ERR	120,000.00	82,778.90	68.98%	0.00	0.00	ERR
Idaho	391,370.66	391,370.66	100.00%	89,200.00	89,200.00	100.00%	380,129.59	380,129.59	100.00%
Illinois	600,000.00	600,000.00	100.00%	864,700.00	884,700.00	100.00%	968,100.00	968,100.00	100.00%
Indian Tribes	0.00	0.00	ERR	120,000.00	120,000.00	100.00%	0.00	0.00	ERR
Indiana	819,250.35	819,250.35	100.00%	490,700.00	490,700.00	100.00%	405,600.00	405,600.00	100.00%
Iowa	780,000.00	780,000.00	100.00%	271,200.00	271,200.00	100.00%	398,400.00	398,400.00	100.00%
Kansas	101,284.90	101,284.90	100.00%	210,720.99	210,720.99	100.00%	103,100.00	103,100.00	100.00%
Kentucky	274,960.00	274,960.00	100.00%	311,140.87	177,281.00	56.98%	362,200.00	247,882.00	68.44%
Louisiana	0.00	0.00	ERR	0.00	0.00	ERR	0.00	0.00	ERR
Maine	465,000.00	465,000.00	100.00%	108,600.00	108,600.00	100.00%	432,300.00	432,300.00	100.00%
Maryland	0.00	0.00	ERR	0.00	0.00	ERR	0.00	0.00	ERR
Massachusetts	1,840,000.00	1,840,000.00	100.00%	410,800.00	410,800.00	100.00%	779,000.00	779,000.00	100.00%
Michigan	700,000.00	700,000.00	100.00%	744,000.00	744,000.00	100.00%	627,982.00	627,982.00	100.00%
Minnesota	1,062,493.27	1,062,493.27	100.00%	320,000.00	320,000.00	100.00%	642,300.00	159,107.26	24.77%
Mississippi	0.00	0.00	ERR	136,871.62	80,430.78	58.76%	0.00	0.00	ERR
Missouri	537,799.00	537,799.00	100.00%	491,000.00	491,000.00	100.00%	310,900.00	310,900.00	100.00%
Montana	207,986.00	207,986.00	100.00%	0.00	0.00	ERR	0.00	0.00	ERR
Nebraska	600,000.00	600,000.00	100.00%	150,400.00	150,400.00	100.00%	392,700.00	392,700.00	100.00%
Nevada	0.00	0.00	ERR	7,500.00	7,500.00	100.00%	0.00	0.00	ERR
New Hampshire	154,143.19	154,143.19	100.00%	21,185.22	21,185.22	100.00%	121,148.81	121,148.81	100.00%
New Jersey	400,000.00	400,000.00	100.00%	84,457.29	84,457.29	100.00%	28,383.83	25,421.56	89.66%
New Mexico	187,736.69	187,736.69	100.00%	50,784.56	42,284.41	83.26%	89,931.70	62,852.78	69.89%
New York	2,160,000.00	2,160,000.00	100.00%	1,104,600.00	1,104,600.00	100.00%	1,466,064.00	1,466,064.00	100.00%
North Carolina	135,708.54	135,708.54	100.00%	140,579.13	140,579.13	100.00%	451,600.00	451,600.00	100.00%
North Dakota	61,639.24	61,639.24	100.00%	40,600.76	40,600.76	100.00%	10,646.99	10,646.99	100.00%
Northern Mariana Is.	23,212.00	23,212.00	100.00%	0.00	0.00	0.00%	1,740.00	1,740.00	100.00%
Ohio	700,000.00	700,000.00	100.00%	945,100.00	945,100.00	100.00%	848,600.00	848,600.00	100.00%
Oklahoma	182,279.00	182,279.00	100.00%	141,546.63	141,546.63	100.00%	0.00	0.00	ERR
Oregon	560,000.00	560,000.00	100.00%	223,000.00	223,000.00	100.00%	497,900.00	497,900.00	100.00%
Pennsylvania	1,991,883.48	1,920,685.81	96.43%	1,007,214.11	1,007,214.11	100.00%	830,402.58	830,402.58	100.00%
Puerto Rico	400,000.00	400,000.00	100.00%	237,600.00	237,600.00	100.00%	86,758.00	86,758.00	100.00%
Rhode Island	330,000.00	330,000.00	100.00%	68,100.00	68,100.00	100.00%	537,853.02	537,853.02	100.00%
South Carolina	348,063.58	348,063.58	100.00%	242,399.61	242,399.61	100.00%	268,600.00	68,010.95	25.32%
South Dakota	0.00	0.00	ERR	0	0.00	ERR	0.00	0.00	ERR
Tennessee	540,000.00	540,000.00	100.00%	502,300.00	502,300.00	100.00%	713,200.00	678,460.96	95.13%
Texas	494,129.00	494,129.00	100.00%	885,782.00	885,782.00	100.00%	0.00	0.00	ERR
Utah	189,964.67	189,964.67	100.00%	97,140.82	97,140.82	100.00%	0.00	0.00	ERR
Vermont	71,175.46	71,175.46	100.00%	48,900.00	42,872.77	87.67%	0.00	0.00	ERR
Virgin Islands	0.00	0.00	ERR	0	0.00	ERR	0.00	0.00	ERR
Virginia	774,394.58	774,394.58	100.00%	381,900.00	381,900.00	100.00%	431,800.00	420,257.99	97.33%
Washington	353,849.40	353,849.40	100.00%	363,700.00	363,700.00	100.00%	278,300.00	278,300.00	100.00%
West Virginia	0.00	0.00	ERR	0.00	0.00	ERR	0.00	0.00	ERR
Wisconsin	1,500,000.00	1,500,000.00	100.00%	380,800.00	380,800.00	100.00%	928,000.00	928,000.00	100.00%
Wyoming	0.00	0.00	ERR	0	0.00	ERR	0.00	0.00	ERR
Total	24,008,595.24	23,877,303.85	99.45%	14,839,338.15	14,530,559.96	97.92%	16,803,510.52	14,830,645.43	88.26%

07/31/86

Federal Solar Energy and Energy Conservation Bank State Funding

STATE	FOURTH ALLOCATION			FIFTH ALLOCATION			TOTAL ALLOCATION		
	PLAN	ACTUAL	%	PLAN	ACTUAL	%	PLAN	ACTUAL	%
Alabama	336,700.00	83,751.00	24.87%	53,400.00	0.00	0.00%	473,678.00	166,729.00	35.24%
American Somoa	46,100.00	0.00	0.00%	22,600.00	0.00	0.00%	188,700.00	120,000.00	63.59%
Arizona	251,500.00	78,037.88	31.03%	44,400.00	(.00)	.00%	459,000.62	241,138.50	52.54%
Arkansas	516,000.00	516,000.00	100.00%	106,500.00	45,412.50	42.64%	2,025,000.00	1,963,912.50	96.98%
California	657,600.00	97,229.40	14.79%	135,000.00	0.00	0.00%	4,588,000.00	3,247,741.23	70.79%
Colorado	261,700.00	35,564.08	13.59%	51,200.00	0.00	0.00%	627,357.73	281,114.68	44.80%
Connecticut	465,500.00	38,776.00	8.33%	87,300.00	0.00	0.00%	2,057,700.00	1,247,366.75	60.62%
Delaware	122,200.00	0.00	0.00%	0.00	0.00	ERR	175,700.00	10,916.00	6.21%
District of Columbia	196,100.00	4,779.44	2.44%	23,100.00	0.00	0.00%	297,413.02	82,992.46	27.90%
Florida	290,900.00	0.00	0.00%	69,900.00	0.00	0.00%	2,322,300.00	1,792,136.53	77.17%
Georgia	204,600.00	76,787.02	37.53%	48,800.00	0.00	0.00%	1,081,837.40	881,980.66	83.08%
Guam	46,500.00	0.00	0.00%	0.00	0.00	ERR	46,500.00	0.00	0.00%
Hawaii	51,500.00	2,396.10	4.65%	20,000.00	0.00	0.00%	191,500.00	85,175.00	44.48%
Idaho	469,000.00	128,983.48	27.50%	86,700.00	0.00	0.00%	1,416,400.25	989,683.73	69.87%
Illinois	942,500.00	811,043.52	86.05%	198,003.51	0.00	0.00%	5,593,303.51	3,263,843.52	90.83%
Indian Tribes	121,300.00	12,245.81	10.10%	52,200.00	0.00	0.00%	293,500.00	132,245.81	45.06%
Indiana	465,700.00	313,237.07	67.26%	116,500.00	26,308.65	22.58%	2,297,750.35	2,055,696.07	89.44%
Iowa	713,900.00	713,900.00	100.00%	137,700.00	90,870.88	65.99%	2,301,200.00	2,254,370.88	97.97%
Kansas	322,200.00	226,966.31	70.44%	84,600.00	0.00	0.00%	821,905.89	642,072.20	78.12%
Kentucky	282,100.00	227,379.00	80.60%	62,800.00	0.00	0.00%	1,293,200.87	927,302.00	71.72%
Lousiana	146,400.00	0.00	0.00%	0.00	0.00	ERR	146,400.00	0.00	0.00%
Maine	341,700.00	54,883.95	16.06%	62,800.00	0.00	0.00%	1,410,400.00	1,060,783.95	75.21%
Maryland	238,500.00	0.00	0.00%	43,400.00	0.00	0.00%	281,900.00	0.00	0.00%
Massachusetts	662,700.00	546,170.65	82.42%	138,400.00	0.00	0.00%	3,830,900.00	3,575,970.65	93.35%
Michigan	542,500.00	128,080.76	23.61%	118,700.00	0.00	0.00%	2,933,182.00	2,400,062.76	81.82%
Minnesota	451,500.00	0.00	0.00%	96,000.00	0.00	0.00%	2,572,293.27	1,541,600.53	59.93%
Mississippi	130,000.00	0.00	0.00%	0.00	0.00	ERR	268,871.62	80,430.78	30.14%
Missouri	633,600.00	633,600.00	100.00%	119,000.00	12,657.00	10.64%	2,092,299.00	1,985,956.00	94.92%
Montana	307,000.00	0.00	0.00%	0.00	0.00	ERR	514,986.00	207,986.00	40.39%
Nebraska	419,900.00	6,170.84	1.47%	75,700.00	0.00	0.00%	1,638,700.00	1,149,270.84	70.13%
Nevada	0.00	0.00	ERR	0.00	0.00	ERR	7,500.00	7,500.00	100.00%
New Hampshire	210,500.00	72,727.15	34.55%	42,300.00	0.00	0.00%	549,277.22	369,204.37	67.22%
New Jersey	322,000.00	36,616.12	11.37%	76,300.00	(.00)	.00%	911,111.12	548,494.97	59.98%
New Mexico	196,400.00	48,819.16	24.86%	47,200.00	0.00	0.00%	572,052.95	341,693.04	59.73%
New York	791,700.00	286,038.08	36.13%	183,400.00	0.00	0.00%	5,705,764.00	5,016,702.08	87.92%
North Carolina	294,200.00	294,200.00	100.00%	83,900.00	64,007.07	76.29%	1,105,987.67	1,086,094.74	98.20%
North Dakota	260,000.00	30,190.37	11.61%	48,900.00	(.00)	.00%	421,788.99	143,077.36	33.92%
Northern Mariana Is.	69,700.00	0.00	0.00%	20,000.00	0.00	0.00%	114,652.00	24,952.00	21.76%
Ohio	1,157,158.19	820,946.11	70.93%	188,300.00	0.00	0.00%	5,839,158.19	5,314,646.11	86.34%
Oklahoma	322,600.00	214,078.29	66.36%	70,700.00	0.00	0.00%	717,125.63	537,903.92	75.01%
Oregon	511,000.00	407,333.33	79.76%	86,500.00	0.00	0.00%	1,878,400.00	1,680,455.33	89.46%
Pennsylvania	796,400.00	154,573.79	19.41%	160,600.00	0.00	0.00%	4,786,500.17	3,912,876.29	81.75%
Puerto Rico	256,300.00	0.00	0.00%	25,700.00	0.00	0.00%	1,006,858.00	724,358.00	71.94%
Rhode Island	455,300.00	137,246.34	30.14%	81,800.00	0.00	0.00%	1,473,053.02	1,073,199.36	72.86%
South Carolina	323,900.00	.00	.00%	67,000.00	0.00	0.00%	1,249,963.19	658,474.14	52.68%
South Dakota	131,500.00	5,000.00	3.80%	0.00	0.00	ERR	131,500.00	5,000.00	3.80%
Tennessee	420,100.00	0.00	0.00%	108,500.00	0.00	0.00%	2,284,100.00	1,720,760.96	75.34%
Texas	342,200.00	194,000.00	56.69%	90,100.00	0.00	0.00%	1,812,211.00	1,573,911.00	86.85%
Utah	387,000.00	350,742.75	90.63%	90,800.00	35,791.61	39.42%	764,905.49	673,639.85	88.07%
Vermont	211,300.00	17,169.47	8.13%	55,900.00	0.00	0.00%	387,275.46	131,217.70	33.88%
Virgin Islands	120,000.00	36,000.00	30.00%	0.00	0.00	ERR	120,000.00	36,000.00	30.00%
Virginia	392,900.00	36,492.71	9.29%	91,200.00	0.00	0.00%	2,072,194.58	1,613,045.28	77.84%
Washington	398,400.00	315,250.60	79.13%	73,100.00	0.00	0.00%	1,467,349.40	1,311,100.00	89.35%
West Virginia	137,300.00	0.00	0.00%	0.00	0.00	ERR	137,300.00	0.00	0.00%
Wisconsin	850,500.00	651,772.00	76.63%	145,000.00	0.00	0.00%	3,804,300.00	3,460,572.00	90.96%
Wyoming	120,000.00	0.00	0.00%	0.00	0.00	ERR	120,000.00	0.00	0.00%
Total	20,116,258.19	8,845,400.58	43.97%	3,891,903.51	275,047.71	7.07%	79,659,605.61	62,358,957.53	78.28%

Table II-1B.
Low Income Conservation Expenditures
By State, Region and Source FY1985
For NASCSP Survey States

FEDERAL REGION	STATE	TOT.FEDL $	TOT.STATE $	TOT PVT $	TOTAL	EST. CUMLTV. TOTAL EXPENDTR. FY1978-1985 2/
	1985 TOTALS	$359,130,403	$37,930,000	$75,156,555	$472,666,958	$1,949,876,631
	CONNECTICUT	$2,504,662	$3,230,000	$40,000	$5,774,662	$29,936,091
	MAINE	$2,972,113	$0	$0	$2,972,113	$28,895,787
	MASSACHUSETTS	$26,401,073	$25,500,000	$6,140,000	$60,041,073	$143,978,788
I	NEW HAMPSHIRE	$3,047,457	$0	$20,000	$3,067,457	$12,448,621
	RHODE ISLAND	$1,862,637	$0	$0	$1,862,637	$11,344,661
	VERMONT	$3,128,020	$0	$0	$3,128,020	$19,049,774
	total	$41,915,962	$28,730,000	$6,200,000	$76,845,962	$245,653,722
	NEW YORK	$38,550,000	$0	$0	$38,580,000	$196,077,298
	total	$38,550,000	$0	$0	$38,580,000	$196,077,298
	DELAWARE	$1,243,349	$0	$0	$1,243,349	$4,783,531
	PENNSYLVANIA	$20,249,449	$0	$7,000,000	$27,249,449	$99,386,565
III	WEST VIRGINIA	$4,971,041	$0	$0	$4,971,041	$29,133,973
	total	$26,463,839	$0	$7,000,000	$33,463,839	$133,304,069
	ALABAMA	$4,429,032	$0	$0	$4,429,032	$23,117,995
	GEORGIA	$4,416,119	$0	$0	$4,416,119	$22,964,154
	KENTUCKY	$8,096,398	$0	$25,000	$8,121,398	$41,419,153
IV	MISSISSIPPI	$3,440,002	$0	$0	$3,440,002	$15,442,414
	NO. CAROLINA	$5,553,064	$0	$0	$5,553,064	$28,549 931
	SO. CAROLINA	$3,327,846	$0	$0	$3,327,846	$15,861,381
	TENNESSEE	$8,752,530	$0	$176,055	$8,928,585	$37,176,443
	total	$38,014,991	$0	$201,055	$38,216,046	$184,531,471
	1/ ILLINOIS	$29,163,013	$0	$132,500	$29,715,513	$111,332,202
	INDIANA	$14,490,404	$0	$0	$14,490,404	$84,299,923
	MICHIGAN	$17,645,000	$3,000,000	$0	$20,645,000	$121,025,000
V	MINNESOTA	$18,555,441	$1,000,000	$5,200,000	$24,755,441	$130,018,171
	OHIO	$27,462,047	$0	$0	$27,462,047	$142,315,378
	WISCONSIN	$18,156,315	$0	$7,500,000	$25,656,315	$93,275,443
	total	$125,472,220	$4,000,000	$12,832,500	$142,724,720	$682,266,117
	ARKANSAS	$1,623,482	$0	$0	$1,623,482	$15,890,000
	LOUISIANA	$2,989,609	$0	$0	$2,989,609	$10,244,502
VI	OKLAHOMA	$4,860,556	$0	$0	$4,860,556	$25,399,679
	TEXAS	$14,861,888	$0	$0	$14,861,888	$43,084,092
	total	$24,335,535	$0	$0	$24,335,535	$94,618,273

Table D-1

Federal Low-Income Conservation Programs

FY1978 - FY1985

(Continued)

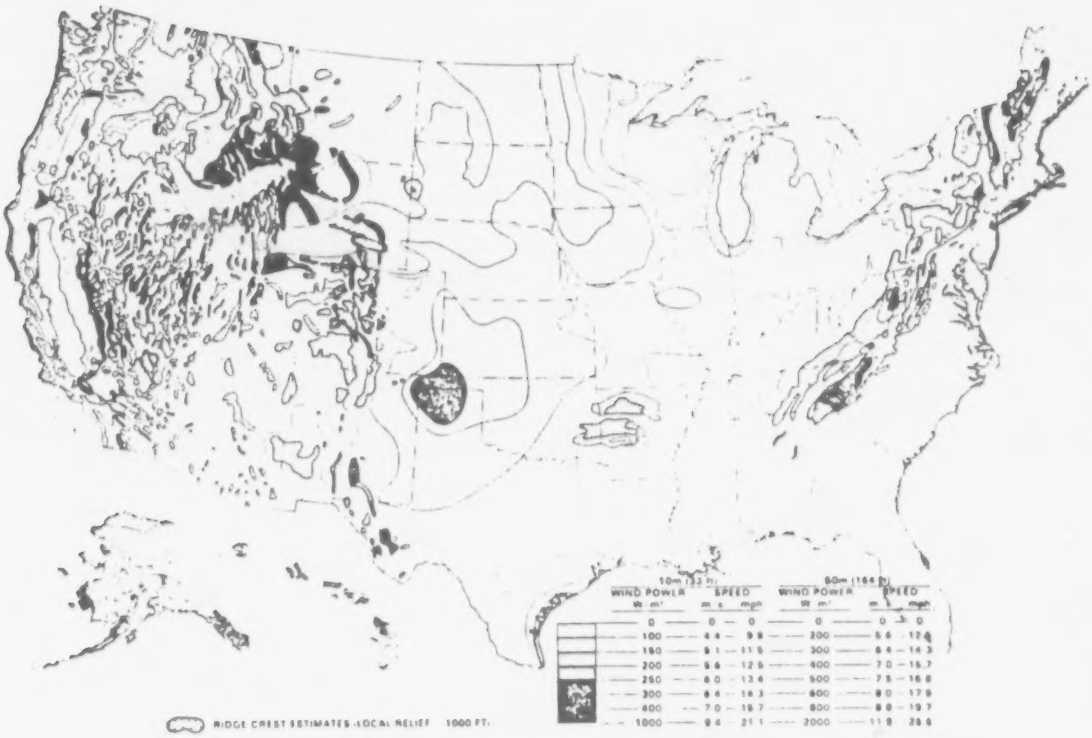
DOE/WAP

	OWNER/OCC			RENTER/DETACHED			RENTER/MULTI-FAMILY			MOBILE		
	THRU 83	FY84	FY85	THRU 83	FY84	FY85	THRU 83	FY84	FY85	THRU 83	FY84	FY85
ALABAMA	14118	1348	800	436	90	89			50	297	360	235
ALASKA	2267	564	708	406	121	145	233	91	200			
ARIZONA	6300	1000	1000	700	100	100						
ARKANSAS	12116	3079	2058	686	597	280	31	30	84			
CALIFORNIA	13220	1809	2889	3156	2016	2024	807	2198	866			
CONNECTICUT	3264	1201	511	1069	416	355	3249	818	439		10	
DELAWARE	1961	384	326	671	138	100	70		11			
GEORGIA	8243	1535	1472	1667	196	224	146	43	29			
HAWAII	1581	373	269	1365	621	449	1221	554	402			
IDAHO	8896	1263	1392	2698	1280	714			87			
ILLINOIS	24352	3931	3671	3401	1155	1833	7854	2896	610			
INDIANA	35845	3836	2134	8924	1241	847	675	229	42			
IOWA		3188	1641		1686	549		365	549			
KANSAS	11061	1917	994	3100	541	280	1573	273	142			
KENTUCKY	15896	2414	1975	1949	75	105	39			10000	900	850
LOUISIANA	2126	506	506	397	95	95	284	67	67	28	7	7
MAINE	12696	1552	1167	1547	396	226	686	407	185			
MASSACHUSETTS	12959	1587	1774	12104	293	138		2505	2030			
MICHIGAN	51890	9656	6154	4438	2699	1197	4438	1817	1762			
MINNESOTA	36960	3872	2805	11248	3169	2806						
MISSISSIPPI		1092	1025		58	65		1			127	120
MISSOURI	36113	4740	2557	3047	805	1077	111	36	145			
MONTANA	6768			2547			332					
NEBRASKA	8904	1774	1207	2631	558	346	560	79	167			
NEW HAMPSHIRE	4463	729		1110			974	339				
NEW JERSEY	7828			3489			14307					
NEW MEXICO												
NEW YORK	36030	5421	8268	24771	3727	5685	24771	3727	5685	4504	678	1033
NO. CAROLINA	17676	2625	1271	1425	748	402	125	21				
NO. DAKOTA	6959	1237	1000	1540	560	450	532	146	130			
OHIO	24506	7091	7311	5178	2593	2345	9792	4005	4138			
OKLAHOMA	14351	1786	1707	989	240	158	12	6	30			
OREGON	8467	1701	351	1867	621	155	833	226	89			
PENNSYLVANIA	39197	7676	6469	19220	5238	2300			256			
RHODE ISLAND	7942	701		3738	767		1484	101		1025	43	
SO. CAROLINA	4793	227	320	774	446	206	207	1	5			100
TENNESSEE	14337	2039	4123	956	352	867	236	13	101			541
TEXAS												
UTAH		993	583		520	218		72	96			
VERMONT	4575	572	474	1988	205	171	1910	249	152	2288	261	202
VIRGINIA		1860			563			24				
WASHINGTON	10909	1613	1356	2275	662	651	533	270	148			
WEST VIRGINIA	21108	1391	1216	6528	436	373	746	74	33			
WISCONSIN		4090	4037		1606	1766		1036	1473			
WYOMING	2121	581		471	167		63	31				
TOTAL STATES	38	41	37	38	40	37	32	34	32	6	8	8
TOTAL	552798	94954	77521	144506	37797	29791	78834	22750	20203	18142	2386	3088

SETTLEMENT
EXHIBIT H

CALCULATION OF RATIOS FOR DISTRIBUTION TO STATES AND TERRITORIES — M.D.L. 378

State	Consumption	Ratio	State	Consumption	Ratio
Alabama	626,803,520	0.01534512450	Nebraska	301,217,700	0.00737427752
Alaska	158,047,980	0.00386926023	Nevada	165,454,200	0.00405057600
American Samoa	7,275,000	0.00017810331	New Hampshire	190,375,330	0.00466068401
Arizona	418,994,930	0.01025764719	New Jersey	1,507,862,710	0.03691482302
Arkansas	519,811,670	0.01272579770	New Mexico	267,574,460	0.00655063871
California	3,739,318,300	0.09154432453	New York	3,162,994,520	0.07743502253
Colorado	439,201,380	0.01075233249	No. Mariana Islands	3,763,000	0.00009212409
Connecticut	693,689,220	0.01698259040	North Carolina	916,800,700	0.02244470625
Delaware	193,932,730	0.00474777469	North Dakota	149,717,090	0.00366530709
District of Columbia	97,574,660	0.00238877935	Ohio	1,534,904,170	0.03757684000
Florida	1,887,260,600	0.04620307312	Oklahoma	504,488,400	0.01235066023
Georgia	909,619,880	0.02226890861	Oregon	404,894,790	0.00991245384
Guam	60,196,000	0.00147369165	Pennsylvania	1,901,863,900	0.04656058461
Hawaii	280,655,260	0.00687087703	Puerto Rico	389,132,000	0.00952655624
Idaho	167,643,790	0.00410418057	Rhode Island	161,953,570	0.00396487514
Illinois	1,876,159,080	0.04593129065	South Carolina	486,978,850	0.01192199923
Indiana	1,006,156,560	0.02463227660	South Dakota	146,053,670	0.00357562087
Iowa	532,229,530	0.01302980621	Tennessee	660,920,850	0.01618036977
Kansas	457,905,310	0.01121023378	Texas	3,013,545,120	0.07377626891
Kentucky	523,601,010	0.01281856663	Utah	240,978,330	0.00589952410
Louisiana	971,591,210	0.02378606310	Vermont	97,762,860	0.00239338678
Maine	300,279,730	0.00735131456	Virgin Islands	188,953,000	0.00462586316
Maryland	731,363,020	0.01790490359	Virginia	1,048,324,650	0.02566461699
Massachusetts	1,398,309,100	0.03423278036	Washington	623,786,920	0.01527127344
Michigan	1,391,772,090	0.03407274419	West Virginia	244,121,480	0.00597647330
Minnesota	708,814,590	0.01735288297	Wisconsin	718,698,070	0.01759484593
Mississippi	557,786,510	0.01365548081	Wyoming	166,569,650	0.00407788395
Missouri	806,514,320	0.01974472423	Totals	40,847,079,480	1.00000000000
Montana	184,882,510	0.00452621123			

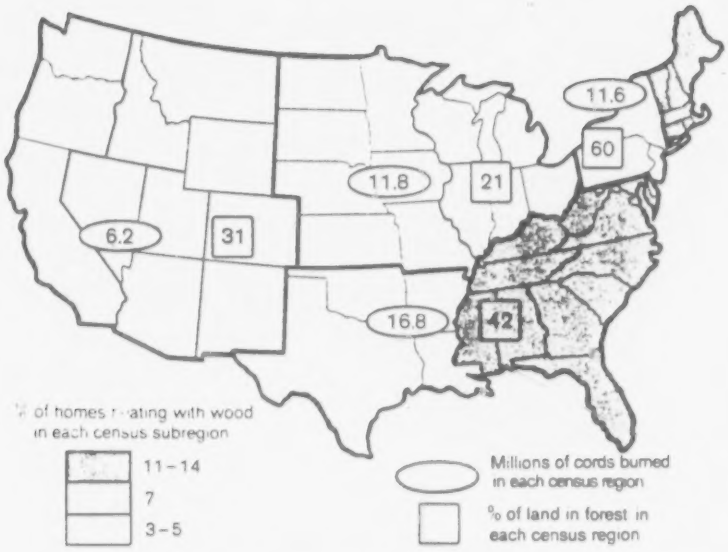


U.S. ANNUAL AVERAGE WIND POWER (Pacific Northwest Laboratory-1980)

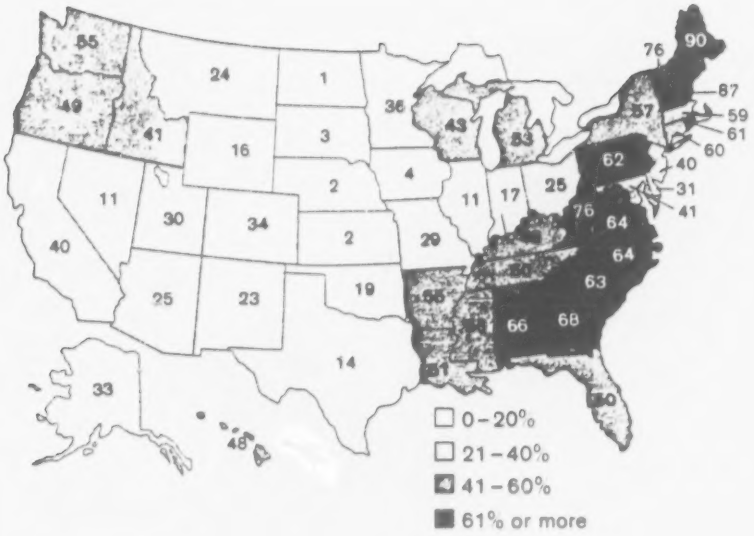
MOST PROMISING HYDROPOTENTIAL IN EACH U.S. ELECTRICITY POWER POOL REGION

	Sites with dams		Annual	Undeveloped sites		Annual
Region	Number	Capacity	output	Number	Capacity	output
WSCC	315	8,730	16,416	204	11,682	33,392
ECAR	178	2,900	10,620	16	1,540	2,540
NPCC	553	2,432	8,367	102	2,394	8,336
SWPP	62	1,027	3,602	40	1,217	3,747
MAIN	58	1,244	3,483	0	0	0
SERC	100	1,513	2,416	83	5,234	11,103
MARCA	46	1,022	1,573	2	24	81
MAAC	46	465	1,024	1	424	521
ERCOT	19	137	292	33	466	950
Alaska	10	17	162	49	3,510	15,380
Hawaii	7	9	28	7	29	84
Total	1,394	19,496	47,983	537	26,520	76,134

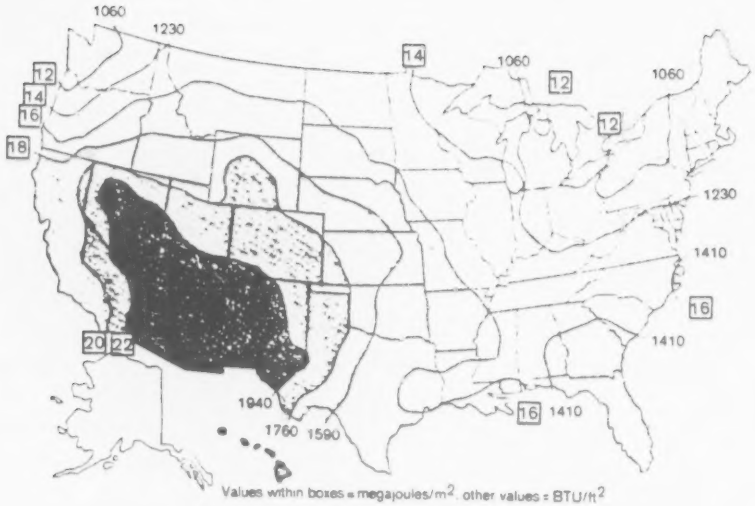
Note: Capacity is in megawatts, output is in millions of kilowatt hours per year. Mutually exclusive competing projects are not double counted. MAIN values are estimates.
Source: U.S. Army Corps of Engineers 1983.



REGIONAL USE OF WOOD FOR RESIDENTIAL HEATING (US DOE 1984



PERCENT OF LAND IN FOREST (US Forest Service 1982)



SOLAR ENERGY. Annual average insolation on a south facing surface with tilt = latitude + 15° (Solar Energy Research Institute 1981b)

NATIONWIDE RANKINGS BASED UPON 500 KWH CONSUMPTION PER MONTH

COMPANY	CITY	STATE	TOTAL BILL*	AVG.COST CENTS/KWH	RANK
ALABAMA POWER COMPANY	BIRMINGHAM	ALABAMA	$122.40	8.16	96
ALASKA ELECTRIC LIGHT & POWER CO.	JUNEA	ALASKA	$114.73	7.65	120
ARIZONA PUBLIC SERVICE CO.	PHOENIX	ARIZONA	$144.39	9.63	43
CITIZENS UTILITYES CO.	KINGMAN	ARIZONA	$143.58	9.57	47
TUSCON ELECTRIC POWER CO.	TUCSON	ARIZONA	$112.74	7.52	127
ARKANSAS POWER & LIGHT CO.	LITTLE ROCK	ARKANSAS	$144.67	9.64	42
EMPIRE DISTRICT ELECTRIC CO.	GRAVETTE	ARKANSAS	$90.77	6.05	177
OKLAHOMA GAS & ELECTRIC CO.	FORT SMITH	ARKANSAS	$139.93	9.33	54
SOUTHWESTERN ELECTRIC POWER CO.	FAYETTEVILLE	ARKANSAS	$124.11	8.27	92
PACIFIC GAS & ELECTRIC CO.	SAN FRANCISCO	CALIFORNIA	$118.17	7.88	109
SAN DIEGO GAS & ELECTRIC CO.	SAN DIEGO	CALIFORNIA	$195.00	13.00	7
SIERRA PACIFIC POWER CO.	S.LAKE TAHOE	CALIFORNIA	$130.33	8.69	67
SOUTHERN CALIFORNIA EDISON CO.	LONG BEACH	CALIFORNIA	$101.61	6.77	153
HOME LIGHT & POWER CO.	GREELEY	COLORADO	$104.08	6.94	149
PUBLIC SERVICE CO. OF COLORADO	DENVER	COLORADO	$103.17	6.88	150
SOUTHERN COLORADO POWER CO.	PUEBLO	COLORADO	$113.31	7.55	124
CONNECTICUT LIGHT & POWER CO.	HARTFORD	CONNECTICUT	$152.68	10.18	30
THE UNITED ILLUMINATING CO.	BRIDGEPORT	CONNECTICUT	$175.54	11.70	12
DELMARVA POWER & LIGHT CO.	WILMINGTON	DELAWARE	$161.52	10.77	23
POTOMAC ELECTRIC POWER CO.	WASHINGTON	DIST. OF COL.	$107.98	7.20	139
FLORIDA POWER & LIGHT CO.	MIAMI	FLORIDA	$128.37	8.56	73
FLORIDA POWER CORP.	ST. PETERSBURG	FLORIDA	$130.05	8.67	68
GULF POWER CO.	PENSACOLA	FLORIDA	$114.39	7.63	122
TAMPA ELECTRIC CO.	TAMPA	FLORIDA	$125.94	8.40	83
GEORGIA POWER CO.	ATLANTA	GEORGIA	$97.41	6.49	164
SAVANNAH ELECTRIC & POWER CO	SAVANNAH	GEORGIA	$122.85	8.19	95
HAWAII ELECTRIC LIGHT CO.	HILO	HAWAII	$200.62	13.37	6
HAWAIIAN ELECTRIC CO.	HONOLULU	HAWAII	$154.95	10.33	28
MAUI ELECTRIC CO.	KAHULUI	HAWAII	$211.78	14.12	2
IDAHO POWER CO.	BOISE	IDAHO	$62.19	4.15	194
UTAH POWER & LIGHT COMPANY	REXBURG	IDAHO	$104.49	6.97	147
WASHINGTON WATER POWER CO.	LEWISTON	IDAHO	$54.30	3.62	199
CENTRAL ILLINOIS LIGHT CO	PEORIA	ILLINOIS	$141.63	9.44	51
CENTRAL ILLINOIS PUBLIC SERVICE CO.	QUINCY	ILLINOIS	$147.09	9.81	37
COMMONWEALTH EDISON CO	CHICAGO	ILLINOIS	$176.20	11.75	11
ILLINOIS POWER CO.	DECATUR	ILLINOIS	$120.90	8.06	103
INTERSTATE POWER CO.	SAVANNA	ILLINOIS	$119.58	7.97	107
IOWA-ILLINOIS GAS & ELEC. CO.	ROCK ISLAND	ILLINOIS	$162.55	10.84	21
MT.CARMEL PUBLIC UTILITY CO.	MOUNT CARMEL	ILLINOIS	$121.26	8.08	100
SHERRARD POWER SYSTEM	SHERRARD	ILLINOIS	$172.88	11.53	14
SO.BELOIT WATER,GAS & ELEC CO.	SO. BELOIT	ILLINOIS	$92.42	6.16	172
UNION ELECTRIC CO.	EAST ST. LOUIS	ILLINOIS	$139.24	9.28	55
INDIANA & MICHIGAN ELEC. CO.	FORT WAYNE	INDIANA	$110.91	7.39	132
INDIANAPOLIS POWER & LT. CO.	INDIANAPOLIS	INDIANA	$96.06	6.40	165
NORTHERN INDIANA PUB. SERVICE	GARY	INDIANA	$168.63	11.24	18
PUBLIC SERVICE CO. OF INDIANA.INC	TERRE HAUTE	INDIANA	$127.91	8.53	75
SO.INDIANA GAS & ELEC. CO	EVANSVILLE	INDIANA	$94.93	6.33	166
INTERSTATE POWER CO.	DUBUQUE	IOWA	$109.72	7.31	134
IOWA ELEC. LT. & POWER CO.	CEDAR RAPIDS	IOWA	$141.34	9.42	52
IOWA POWER & LIGHT	DES MOINES	IOWA	$147.42	9.83	36
IOWA PUBLIC SERVICE CO.	SIOUX CITY	IOWA	$137.89	9.19	57
IOWA SOUTHERN UTILITIES	CENTERVILLE	IOWA	$105.40	7.03	143
IOWA-ILLINOIS GAS & ELEC. CO.	QUAD CITIES	IOWA	$155.07	10.34	27

NATIONWIDE RANKINGS BASED UPON 500 KWH CONSUMPTION PER MONTH

COMPANY	CITY	STATE	TOTAL BILL	AVG.COST CENTS/KWH	RANK
CENTRAL TELEPHONE & UTILITIES CORP.	DODGE CITY	KANSAS	$147.03	9.80	38
EMPIRE DISTRICT ELEC. CO.	BAXTER SPRINGS	KANSAS	$93.59	6.24	169
KANSAS CITY POWER & LT.CO.	OVERLAND PARK	KANSAS	$129.01	8.60	71
KANSAS GAS & ELEC. CO	WICHITA	KANSAS	$114.70	7.65	121
KANSAS POWER & LIGHT CO.	TOPEKA	KANSAS	$119.25	7.95	108
KENTUCKY POWER CO.	ASHLAND	KENTUCKY	$91.54	6.10	174
KENTUCKY UTILITIES CO.	LEXINGTON	KENTUCKY	$87.94	5.86	179
LOUISVILLE GAS & ELEC CO.	LOUISVILLE	KENTUCKY	$109.15	7.28	137
UNION LT. HEAT & POWER CO.	COVINGTON	KENTUCKY	$98.43	6.56	161
CENTRAL LOUISIANA ELEC. CO.	SLIDELL	LOUISIANA	$121.22	8.08	101
GULF STATES UTILITIES	BATON ROUGE	LOUISIANA	$124.69	8.31	89
LOUISIANA POWER & LT.	JEFF.PARISH	LOUISIANA	$86.68	5.78	181
SOUTHWESTERN ELEC. POWER CO.	SHREVPORT	LOUISIANA	$116.30	7.75	111
BANGOR HYDRO-ELECTRIC CO.	BANGOR	MAINE	$125.28	8.35	84
CENTRAL MAINE POWER CO.	PORTLAND	MAINE	$123.81	8.25	93
MAINE PUBLIC SERVICE CO.	PRESQUE ISLE	MAINE	$135.45	9.03	62
BALTIMORE GAS & ELECTRIC	BALTIMORE	MARYLAND	$124.88	8.33	88
CONOWINGO POWER COMPANY	ELKTON	MARYLAND	$158.35	10.56	24
DELMARVA POWER & LIGHT	SALISBURY	MARYLAND	$143.67	9.58	46
POTOMAC EDISON COMPANY	FREDERICK	MARYLAND	$94.49	6.30	167
POTOMAC ELECTRIC POWER CO.	MONTGOMERY CO.	MARYLAND	$111.88	7.46	129
BOSTON EDISON	BOSTON	MASSACHUSETTS	$161.94	10.80	22
CAMBRIDGE ELECTRIC LIGHT CO.	CAMBRIDGE	MASSACHUSETTS	$114.06	7.60	123
COMMONWEALTH ELECTRIC CO.	NEW BEDFORD	MASSACHUSETTS	$146.50	9.77	39
EASTERN EDISON COMPANY	FALL RIVER	MASSACHUSETTS	$142.26	9.48	50
FITCHBURG GAS & ELECTRIC LIGHT CO.	FITCHBURG	MASSACHUSETTS	$163.29	10.89	20
MASSACHUSETTS ELECTRIC CO.	WORCESTER	MASSACHUSETTS	$110.67	7.38	133
NANTUCKET ELECTRIC COMPANY	NANTUCKET	MASSACHUSETTS	$204.65	13.64	4
WESTERN MASS. ELECTRIC CO.	SPRINGFIELD	MASSACHUSETTS	$143.51	9.57	48
CONSUMERS POWER	FLINT	MICHIGAN	$80.58	5.37	184
DETROIT EDISON	DETROIT	MICHIGAN	$114.97	7.66	119
INTERSTATE POWER CO.	ALBERT LEA	MINNESOTA	$124.19	8.28	90
MINNESOTA POWER & LIGHT CO.	DULUTH	MINNESOTA	$81.09	5.41	183
NORTHERN STATES POWER	MINNEAPOLIS	MINNESOTA	$101.04	6.74	155
OTTERTAIL POWER CO.	FERGUS FALLS	MINNESOTA	$125.09	8.34	86
MISSISSIPPI POWER & LIGHT CO.	JACKSON	MISSISSIPPI	$120.92	8.06	102
MISSISSIPPI POWER CO.	GULFPORT	MISSISSIPPI	$97.44	6.50	163
ARKANSAS POWER & LIGHT CO.	CARUTHERSVILLE	MISSOURI	$143.76	9.58	45
EMPIRE DISTRIC CO.	JOPLIN	MISSOURI	$104.67	6.98	145
KANSAS CITY POWER & LIGHT CO.	KANSAS CITY	MISSOURI	$123.60	8.24	94
MISSOURI PUBLIC SERVICE CO.	RAYTOWN	MISSOURI	$137.64	9.18	59
ST.JOSEPH LIGHT & POWER CO.	ST.JOESPH	MISSOURI	$115.98	7.73	112
UNION ELECTRIC COMPANY	ST. LOUIS	MISSOURI	$126.54	8.44	78
MONTANA POWER CO.	BILLINGS	MONTANA	$61.40	4.09	195
MONTANA-DAKOTA UTILITIES CO.	GLENDIVE	MONTANA	$107.50	7.17	140
PACIFIC POWER AND LIGHT CO.	KALISPELL	MONTANA	$72.02	4.80	190
NEVADA POWER	LAS VEGAS	NEVADA	$94.41	6.29	168
SIERRA PACIFIC POWER CO.	RENO	NEVADA	$128.10	8.54	74
CONCORD ELECTRIC CO.	CONCORD	NEW HAMPSHIRE	$119.61	7.97	106
CONNECTICUT VALLEY ELECTRIC CO. INC.	CLAREMONT	NEW HAMPSHIRE	$137.67	9.18	58
EXETER & HAMPTON ELECTRIC CO.	EXETER	NEW HAMPSHIRE	$115.69	7.71	114
GRANITE STATE ELEC. CO.	SALEM	NEW HAMPSHIRE	$125.19	8.35	85
N.H. ELECTRIC COOPERATIVE, INC.	PLYMOUTH	NEW HAMPSHIRE	$115.23	7.68	118

NATIONWIDE RANKINGS BASED UPON 500 KWH CONSUMPTION PER MONTH

COMPANY	CITY	STATE	TOTAL BILL*	AVG.COST CENTS/KWH	RANK
PUBLIC SERVICE CO. OF N.H.	MANCHESTER	NEW HAMPSHIRE	$143.88	9.59	44
ATLANTIC ELECTRIC CO.	BRIDGETON	NEW JERSEY	$172.47	11.50	15
JERSEY CENTRAL POWER & LIGHT CO.	DOVER	NEW JERSEY	$179.13	11.94	10
PUBLIC SERVICE ELEC. & GAS CO.	NEWARK	NEW JERSEY	$171.86	11.46	16
ROCKLAND ELEC. CO.	RAMSEY	NEW JERSEY	$183.15	12.21	9
EL PASO ELEC. CO.	LAS CRUCES	NEW MEXICO	$157.88	10.53	26
PUBLIC SERVICE CO. OF NEW MEXICO	ALBURQUERQUE	NEW MEXICO	$142.29	9.49	49
SOUTHWESTERN PUBLIC SERVICE CO.	ROSWELL	NEW MEXICO	$109.44	7.30	136
TEXAS-NEW MEXICO POWER CO.	ALAMOGORDO	NEW MEXICO	$136.92	9.13	61
CENTRAL HUDSON GASD & ELEC. CORP.	POUGHKEEPSIE	NEW YORK	$184.95	12.33	8
CONSOLIDATED EDISON CO. OF N.Y.	NEW YORK	NEW YORK	$231.95	15.46	1
LONG ISLAND LIGHTING CO.	LONG BEACH	NEW YORK	$205.56	13.70	3
NEW YORK STATE ELEC. & GAS CORP.	BINGHAMTON	NEW YORK	$144.97	9.66	41
NIAGARA MOHAWK POWER CO.	BUFFALO	NEW YORK	$113.28	7.55	125
ORANGE & ROCKLAND UTILITIES,INC.	MIDDLETOWN	NEW YORK	$202.59	13.51	5
ROCHESTER GAS & ELEC. CORP.	ROCHESTER	NEW YORK	$128.58	8.57	72
CAROLINA POWER & LIGHT CO.	RALEIGH	NORTH CAROLINA	$121.46	8.10	99
DUKE POWER CO.	CHARLOTTE	NORTH CAROLINA	$105.90	7.06	142
NANTAHALA POWER & LIGHT CO.	FRANKLIN	NORTH CAROLINA	$100.58	6.71	157
NORTH CAROLINA POWER	ROANOKE R.	NORTH CAROLINA	$132.12	8.81	65
MONTANA-DAKOTA UTILITIES CO.	BISMARCK	NORTH DAKOTA	$106.02	7.07	141
NORTHERN STATES POWER CO.	FARGO	NORTH DAKOTA	$93.31	6.22	170
OTTER TAIL POWER CO.	JAMESTOWN	NORTH DAKOTA	$126.46	8.43	79
CININNATI GAS & ELECTRIC	CINCINNATI	OHIO	$113.25	7.55	126
CLEVELAND ELEC. ILLUMINATING	CLEVELAND	OHIO	$158.04	10.54	25
COLUMBUS & SOUTHERN OHIO ELEC.	COLUMBUS	OHIO	$122.13	8.14	97
DAYTON POWER & LIGHT	DAYTON	OHIO	$131.89	8.79	66
MONOGAHELA POWER CO.	MARIETTA	OHIO	$79.92	5.33	185
OHIO EDISON	AKRON	OHIO	$149.19	9.95	34
OHIO POWER	CANTON	OHIO	$108.30	7.22	138
TOLEDO EDISON	TOLEDO	OHIO	$154.23	10.28	29
OKLAHOMA GAS & ELECTRIC CO.	OKLAHOMA CITY	OKLAHOMA	$111.66	7.44	130
PUBLIC SERVICE CO. OF OKLAHOMA	TULSA	OKLAHOMA	$112.19	7.48	128
CP NATIONAL CORP.	LA GRANDE	OREGON	$66.19	4.41	193
IDAHO POWER CO.	ONTARIO	OREGON	$57.78	3.85	197
PACIFIC POWER & LIGHT CO.	PORTLAND	OREGON	$72.44	4.83	189
PORTLAND GENERAL ELEC. CO.	PORTLAND	OREGON	$70.19	4.68	192
DUQUNSE LIGHT CO.	PITTSBURG	PENNSYLVANIA	$151.47	10.10	32
METROPOLITIAN EDISION CO.	READING	PENNSYLVANIA	$137.43	9.16	60
PENNSYLVANIA ELECTRIC CO.	EIRE	PENNSYLVANIA	$124.17	8.28	91
PENNSYLVANIA POWER & LIGHT	ALLENTOWN	PENNSYLVANIA	$129.99	8.67	69
PENNSYLVANIA POWER CO.	NEW CASTLE	PENNSYLVANIA	$145.98	9.73	40
PHILADELPHIA ELECTRIC CO.	PHILADELPHIA	PENNSYLVANIA	$175.05	11.67	13
WEST PENN POWER CO.	WASHINGTON	PENNSYLVANIA	$81.39	5.43	182
BLACKSTONE VALLEY ELECTRIC CO.	PAUTUCKET	RHODE ISLAND	$151.98	10.13	31
NARRAGANSETT ELECTRIC COMPANY	PROVIDENCE	RHODE ISLAND	$134.41	8.96	64
NEWPORT ELECTRIC COMPANY	NEWPORT	RHODE ISLAND	$149.97	10.00	33
CAROLINA POWER & LIGHT CO.	FLORENCE	SOUTH CAROLINA	$121.68	8.11	98
DUKE POWER CO.	GREENVILLE	SOUTH CAROLINA	$98.85	6.59	159
LOCKHART POWER CO.	JONESVILLE	SOUTH CAROLINA	$104.76	6.98	144
SOUTH CAROLINA ELEC. & GAS CO.	COLUMBIA	SOUTH CAROLINA	$125.94	8.40	82
BLACK HILLS POWER & LIGHT CO.	RAPID CITY	SOUTH DAKOTA	$117.97	7.86	110
NORTHERN STATES POWER CO.	SIOUX FALLS	SOUTH DAKOTA	$104.65	6.98	146

NATIONWIDE RANKINGS BASED UPON 500 KWH CONSUMPTION PER MONTH

COMPANY	CITY	STATE	TOTAL BILL	AVG.COST CENTS/KWH	RANK
NORTHWESTERN PUBLIC SERVICE CO.	ABERDEEN	SOUTH DAKOTA	$141.05	9.40	53
KINGSPORT POWER COMPANY	KINGSPORT	TENNESSEE	$86.77	5.78	180
CENTRAL POWER & LIGHT CO.	CORPUS CHRISTI	TEXAS	$115.32	7.69	117
EL PASO ELECTRIC CO.	EL PASO	TEXAS	$148.89	9.93	35
GULF STATES UTILITIES CO.	BEAUMONT	TEXAS	$169.50	11.30	17
HOUSTON LIGHTING & POWER CO.	HOUSTON	TEXAS	$127.08	8.47	76
SOUTHWESTERN ELECTRIC POWER CO.	LONGVIEW	TEXAS	$126.26	8.42	80
SOUTHWESTERN ELECTRIC SERVICE CO.	JACKSONVILLE	TEXAS	$120.50	8.03	104
SOUTHWESTERN PUBLIC SERVICE CO.	AMARILLO	TEXAS	$119.88	7.99	105
TEXAS UTILITIES ELECTRIC CO.	DALLAS	TEXAS	$125.08	8.34	87
TEXAS-NEW MEXICO POWER CO.	TEXAS CITY	TEXAS	$135.13	9.01	63
WEST TEXAS UTILITIES CO.	ABILENE	TEXAS	$138.96	9.26	56
UTAH POWER & LIGHT CO.	SALT LAKE CITY	UTAH	$129.50	8.63	70
CENTRAL VERMONT PUBLIC SERVICE CORP.	RUTLAND	VERMONT	$91.50	6.10	175
CITIZENS UTILITIES	NEWPORT	VERMONT	$78.21	5.21	186
GREEN MOUNTAIN POWER CORP.	BURLINGTON	VERMONT	$89.64	5.98	178
APPALACHIAN POWER CO.	ROANOAK	VIRGINIA	$98.10	6.54	162
DELMARVA POWER & LIGHT CO.	EXMORE	VIRGINIA	$168.54	11.24	19
OLD DOMINION POWER CO.	NORTON	VIRGINIA	$100.74	6.72	156
POTOMAC ELECTRIC POWER CO.	ARLINGTON	VIRGINIA	$125.97	8.40	81
THE POTOMAC EDISON CO.	WINCHESTER	VIRGINIA	$98.70	6.58	160
VIRGINIA ELECTRIC & POWER CO.	NORFOLK	VIRGINIA	$115.53	7.70	115
PACIFIC POWER & LIGHT	YAKIMA	WASHINGTON	$60.04	4.00	196
PUGET SOUND POWER & LIGHT CO.	BELLEVUE	WASHINGTON	$71.40	4.76	191
WASHINGTON WATER POWER CO.	SPOKANE	WASHINGTON	$55.20	3.68	198
APPALACHIAN POWER CO.	CHARLESTON	WEST VIRGINIA	$102.93	6.86	151
MONONGAHELA POWER CO.	PARKERSBURG	WEST VIRGINIA	$90.99	6.07	176
POTOMAC EDISON CO.	MARTINSBURG	WEST VIRGINIA	$99.58	6.64	158
VIRGINIA ELECTRIC & POWER CO.	HINTON	WEST VIRGINIA	$111.49	7.43	131
WHEELING ELECTRIC CO.	WHEELING	WEST VIRGINIA	$115.47	7.70	116
LAKE SUPERIOR DISTRICT POWER CO.	ASHLAND	WISCONSIN	$93.18	6.21	171
MADISON GAS & ELECTRIC CO.	MADISON	WISCONSIN	$115.85	7.72	113
NORTHERN STATES POWER CO.	LA CROSSE	WISCONSIN	$91.61	6.11	173
SUPERIOR WATER,LIGHT & POWER CO.	SUPERIOR	WISCONSIN	$104.20	6.95	148
WISCONSIN ELECTRIC POWER CO.	MILWAUKEE	WISCONSIN	$109.68	7.31	135
WISCONSIN POWER & LIGHT CO.	JANESVILLE	WISCONSIN	$102.15	6.81	152
WISCONSIN PUBLIC SERVICE CORP.	GREEN BAY	WISCONSIN	$101.30	6.75	154
CHEYENNE LIGHT FUEL & POWER CO.	CHEYENNE	WYOMING	$76.77	5.12	187
PACIFIC POWER & LIGHT CO.	CASPER	WYOMING	$75.84	5.06	188
UTAH POWER & LIGHT CO.	EVANSTON	WYOMING	$126.57	8.44	77

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For individual contacts in state government or citizen groups, or for a more extensive listing, contact FREE at the above address.